

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for controlling service access to a backbone network comprising the steps of:

(a) providing an internet protocol backbone network having a plurality of access points that include traffic control devices, and further providing at least two service classes for the internet protocol backbone network, the service classes distinguished by a level of service, the service classes including at least one lower class that has a lesser demand for a level of service than the other class;

(b) allowing the users of the network provided in step (a) to select one of the service classes, and further dividing the users into the selected service classes;

(c) identifying the usage level of the lower service class;

(d) identifying the usage level of the other class

(e) comparing the usage level of the lower service class identified in step (c) to the capacity of the backbone network required to provide service to the other class; and

[(e)] (f) adjusting the traffic control devices at the access points to the backbone network [[for]] to decrease access of the lower service class to allow the backbone network to provide sufficient capacity in the network for transport of messages for the other class, the decrease in access occurring only when there is insufficient capacity in the network for transport of messages for the other class.

2. (Currently Amended) The method according to Claim 1 wherein the identification of the usage level levels in [[step]]-steps (c) and (d) includes include aggregation of the message flow over the backbone network.

3. (Currently Amended) The method according to Claim 1 wherein the identification of the usage level levels in [[step]] steps (c) and (d) [[is]] are determined by examination of the traffic level connecting the origination address range to the destination address range for the message flow over the backbone network.

4. (Currently Amended) The method according to Claim 1 wherein the identification of the usage ~~level~~ levels in [[step]] steps (c) and (d) [[is]] are determined by examination of the backbone network links connecting the origination addresses to the destination addresses for the message flow over the backbone network.

5. (Currently Amended) The method according to claim 4 wherein the usage level in step (c) is determined by

- (c1) collecting and analyzing the occupancy data of the backbone links to determine path occupancy levels by class of service; and
- (c2) determining the amount of occupancy being utilized by the lesser service class;
- (c3) ~~subtracting the amount of occupancy being utilized by the lesser service class from the available backbone network capacity; and~~
- (c4) ~~comparing the resulting difference from step (c3) to the capacity required to provide service to the other classes of service.~~

6. (Currently Amended) The method according to claim 5 wherein the amount of occupancy being used by the lesser service class is statistically determined in step [[c(2)]] (c2).

7. (Currently Amended) The method according to Claim 1 wherein a backbone network tool is utilized in [[step]] steps (c) and (d) to identify the usage level.

8. (Original) The method according to Claim 1 wherein the lesser service class is assigned a billing rate that is less than the billing rates for the other service classes.

9. (Cancelled)

10. (Currently Amended) The method according to Claim 5 wherein in step [[(e)]] (f) the traffic control devices are adjusted to increase the access to the backbone internet for the ~~lesser~~ lower service class ~~when the traffic load from the other classes decreases when there is sufficient capacity in the network for transport of messages for the other class.~~

11. (Original) The method according to Claim 1 wherein the lesser service class includes messages that have been selectively degraded.

12. (Original) The method according to Claim 11 wherein the lesser service class is assigned a billing rate that is less than the billing rates for the other service classes.

13. (Original) The method according to claim 1 wherein the traffic control devices include at least one traffic shaper.

14. (Previously Presented) The method according to claim 13 further including identification of the messages belonging to other classes before entry into the traffic shaper.

15. (Original) The method according to claim 1 wherein the traffic control devices include at least one media gateway.

16. (Original) The method according to claim 15 further including identification of the messages belonging to other classes before entry into the media gateway.

17. (New) The method according to claim 5 wherein the usage level in step (d) is determined by

(d1) collecting and analyzing the occupancy data of the backbone links to

determine path occupancy levels by class of service; and

(d2) determining the amount of occupancy being utilized by the lesser service class.

18. (New) The method according to claim 17 wherein the comparison of usage levels in step (e) is determined by

(e1) subtracting the amount of occupancy being utilized by the lesser service class as determined in step (c) from the available backbone network capacity; and
(e2) comparing the resulting difference from step (e1) to the capacity required to provide service to the other classes of service as determined in step (d).